Necessary Competencies for The Completion of a Thesis: Students' Perceptions

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Research is a core skill in university education, which allows students to develop knowledge and skills to intervene in their professional field. However, there are areas of opportunity to complete an investigation, and the context of the present study is no exception. According to this background, the objective is to characterize the students' competencies to develop a thesis and identify obstacles in its preparation, presentation, and defense. Concerning methodology, a transversal quantitative approach was used by applying a questionnaire, finding that participants manage some techniques, abilities, competencies, and knowledge and identifying difficulties centered on lack of knowledge and investigative skills. In conclusion, students do not complete their work because theoretical foundations are not put into practice since there are ambiguities in knowledge conceptualization and the operationalization of research skills. The contribution of this study lies in identifying the difficulties in preparing a thesis, which can allow teachers to design an appropriate didactic intervention to meet students' needs for the successful completion of their research and foster interest in the inquiry.

Keywords: abilities, competencies, research, thesis completion

INTRODUCTION

One of the activities that has helped the development of human beings has been research, whose purpose is to solve problems at every moment in human history and explain phenomena and social realities. For this reason, educational organizations and institutions promote and strengthen research skills, making them a transversal axis in students' training. Nonetheless, this task is not easy even though it is a training need in official documents. In reality, the problems deal with its application. That is why in the new educational models, learning under projects is implemented to generate attitudes of curiosity, inquiry, and reflection on issues that the student faces so that from experience, they could develop the investigative skills needed at higher educational levels.

Taking this context into account, the interest of this research arises, which aims to identify students' competencies for investigating and characterize the attributes they perceive as obstacles or difficulties in thesis preparation, presentation, and defense at a higher level. The study took place with students teaching English and French at the Faculty of Languages of the Benemérita Universidad Autónoma de Puebla. The background on the subject refers to studies focused, on the one hand, on understanding and explaining the scientific and epistemological foundations of the research that guide the methodological procedures, the theoretical foundations, the techniques and strategies used for the development of research, is the case of studies such as those of Gadea et al. (2019), Izaguirre et al. (2018), Martel (2016), and Tapia-Sosa et al.

(2017). Other studies focus on the research methodology in a general way that serves as a guide for the development of a research project, explaining the methods, theories, and procedures that underpin each of the stages (Guevara et al., 2020; Pérez et al., 2015 and Ramírez and Zwerg-Villegas, 2012). There are also more specific works that describe each of the parts of a research project, such as those by De la Lama et al. (2022), Miranda-Novales and Villasís-Keever (2019), and Tunal-Santiago (2022), where they explain how to write a research protocol, its importance, and function, as well as some recommendations. In addition, Gallego (2018) and Trigo-Soto (2021) provide strategies and techniques to work on the theoretical-conceptual bases or references that support the research, considering conceptual references and theories. Moreover, the studies by Azuero (2019) and Roncancio et al. (2017) mention the significance of the methodological framework and how to build the instruments and models for data collection and analysis through a classification according to the approach and type of study.

The following lines present basic theoretical concepts for understanding the object of study in question, starting from the conception of the research, its foundations, and perceptions around it. Since its origins, man has shown reasoning skills and an attitude of curiosity that allowed him to know and improve his life through research activities. His search to understand the different phenomena and provide solutions to situations and difficulties led him to enrich empirical and scientific knowledge (Hurtado-Talavera, 2020).

This is how scientific research arises, conceived as a method of experimentation where an organized, systematic, and methodical process is carried out to provide a solution, generating new knowledge, procedures, and techniques (Castro and Silva, 2023). In this research task, epistemology plays an essential role through which we can have the philosophical, theoretical, methodological, and instrumental foundations that serve as means, strategies, and techniques to study the phenomena (Tapia-Sosa et al., 2017). This epistemological foundation has three paradigms (positivist, dialectical, and interpretive or emergent), explaining the different methods and approaches to scientific knowledge (Cabrera-Ramírez and Cepeda-Retana, 2022). In the positivist paradigm, absolute truths are through natural laws and mechanisms of reality, used in studies such as the scientific, clinical, deductive, hypothetical-deductive method, and the clinical and empirical-analytical approach (Vélez and Pérez, 2019).

In the dialectical paradigm, we work under a more holistic and cyclical approach to the phenomena of reality in which the laws of nature, society, and thought are studied through historical dimensions and the use of rationality that each person possesses, that is, the reality is the cognitive appropriation of each human being, and they interpret it based on their individual and social references (Ponce-Vargas, 2018). About the interpretive or emerging paradigm, reality, through the subjectivity and interpretation of the phenomenon, analyzes its historical, cultural, and social particularities, as well as the relationships established between the object of study and its environment. This type of paradigm is for qualitative studies based on hermeneutics and phenomenology (Miranda-Beltrán and Ortiz-Bernal, 2020).

Research is a systematic and methodical process based on the scientific method, which serves as a methodological guide for its development (Hurtado-Talavera, 2020). Such a method provides tools for the objectivity of knowledge and a methodology, including the beginning, development, and conclusion. In this regard, Cienfuegos-Velasco (2019) mentions that it is crucial to research deep knowledge of the functioning, stages, and structure of a scientific method. Regarding the stages, authors conceive them in different ways according to the focus and design of the research, but most of them agree on the existence of three main stages or moments that are problematization, theorization, and demonstration (Barahona-Tapia et al., 2023; García and Mendoza, 2023).

The first stage begins with a problem statement with ideas for the investigation. The protocol includes the research questions, objectives, hypotheses, and delimitations (Aguilera-Eguía et al., 2022). In the second stage, theoretical reference construction supports the inquiry and understanding of the phenomenon. For its construction, it is necessary to identify and define the key concepts of the topic, carry out a state-of-the-art review of the literature of works related to the topic, and categorize the dimensions or base elements that help the operationalization of the variables or categories (Contreras-Colmenares et al., 2023). The third stage brings together the elements of the research methodological process to collect, analyze, and validate the data or information collected. It proposes a methodological

approach that can be qualitative or quantitative, a research design, a data collection method, the determination of the population and sample, and the data analysis model (Azuero, 2019).

For their part, Montes and Montes (2014) mention that a series of skills and knowledge facilitate the development of each research stage. Thus, the minimum elements considered are a clear definition of both the problem and the object of study, strategies for searching and analyzing information, a theoretical base relevant to the topic and the disciplinary area, a clear description of the methodology used for the collection and analysis of data and the development of synthesis and inference skills to present the conclusions.

The role that scientific research has played in all branches of knowledge is of utmost importance since it has become one of the main axes in the innovation and generation of knowledge that explains solutions to different phenomena and situations. Thus, research tasks have been incorporated into the training processes of institutions, providing their students with research skills to approach reality and improve their situation (Montes-Iturrizaga and Arias-Gallegos, 2022). According to Fernández-Monge et al. (2022), research skills are strategies the researcher uses to carry out a project. These skills (especially vision) permit one to interpret phenomena through recognizing, remembering, and manipulating the data or information collected during the research process. Instrumental skills are the operational skills that help the researcher organize inquiry activities (formal language, mastery of cognitive operations, and the development of observation and questioning skills) (Castro and Silva, 2023).

Metacognitive skills allow the researcher to develop their ability to reflect and control their thinking to organize, modify, and develop cognitive processes to self-regulate their learning (Salinas-Quintanilla et al., 2018). Besides, thinking skills contribute to fundamental tasks such as arguing, analyzing, solving problems, and evaluating information and processes. Concept construction skills refer to analysis, abstract understanding, and critical thinking that make ideas possible (Fernández-Monge et al., 2022).

For designing, the methods and techniques are according to their purpose, type, and scope. Within the branch of research methodology, different authors mention two main methodological approaches: qualitative and quantitative (Torres-Fernández, 2016). In the case of qualitative research, which aims to understand and interpret social phenomena through the behaviors and meanings that the subject expresses in his interaction with his environment, phenomenological, hermeneutical, ethnographic, case study, action research, or narrative-biographical studies are usually applied. (Neill et al., 2018). In quantitative research, where the purpose is to describe, explain, or predict quantifiable and occurring phenomena through statistical techniques, they are applicable in experimental, quasi-experimental, and non-experimental studies and to designs such as descriptive, correlational, causal-comparative, or experimental research. (Sanchez, 2019). Other criteria to classify research are basic or applied, and in documentary, experimental, or field studies based on methods of obtaining data. Regarding their scope, they are exploratory, descriptive, or explanatory, and transversal or longitudinal for their duration.

Among the research tasks is the presentation of the report or report of the findings revealed during the entire investigation. This task is usually a challenge for students new to research since the type of text must match the characteristics of scientific writing. Serrano-Guzmán et al. (2018) mention that the transmission of the knowledge generated from a research task must be through scientific writing based on three basic principles: accuracy, clarity, and concise. In accuracy, there must be formal language, taking care of their communicative intention and target audience. Clarity is in the ease of reading and understanding the text through simple and structured sentences and coherent organization of main and secondary ideas. Concise refers to the relevance of the information, using the exact number of words that correctly express the idea or message you want to convey (Perdomo and Morales, 2022). Regarding the structure of the scientific document, most of them include the famous IMRyD format (Introduction, Methodology, Results, and Discussions) or the IMRAD model (Introduction, Method, Results, Analysis, and Discussions) even though the parts of the writing depend on the type of document you want to publish and the specifications of each publisher or institution (Auris-Villegas et al., 2023).

In this regard, other authors mention that in every report or research report, the fundamental elements are the "title, authors, summary (abstract in English), keywords, introduction, theoretical or conceptual framework (in the case of a thesis), methodology (also called materials and methods), results, discussions,

conclusions, recommendations (optional), acknowledgments, references and complementary material (optional)" (Casares-Salazar et al., 2019, p. 22). On the other hand, Zamora and Venegas (2013) mention that the formal structure of the thesis consists of an Introduction. It deals with the context, problem, delimitation, justification, objectives, questions, and possible hypotheses, which will guide the development of the research (Casares-Salazar et al., 2019). Background. An investigation contains previous studies or research with great significance and relevance to address the topic (Bonet-Collazo et al., 2023). Theoretical framework. It describes the theories, models, and paradigms, providing support and a conceptual structure to understand the phenomenon studied and address the problem from a solid scientific knowledge base (Molina-Gutiérrez et al., 2018).

Methodology. The section describes the approaches, methods, and sample population, as well as the data collection techniques and instruments, and the results analysis models are developed (Azuero, 2018). Results and discussion. This section reports the most relevant findings obtained in the research presented in tables, graphs, or figures with their theoretical foundation and critical and objective interpretation (Casares-Salazar et al., 2019). Conclusion. It presents a synthesis of the results, explaining why and making a self-criticism of the method used and the limitations, ending with the proposal of future lines of research (Bonet-Collazo et al., 2023).

In research, students face many challenges and difficulties with the knowledge, skills, and attitudes they must develop to carry out the methodological and theoretical framework while writing the final research (Valenzuela, 2021). Criollo and Recio (2020) also mention some limitations that students present when developing a research project like an indifferent attitude toward research activities, problems with academic writing and understanding of scientific texts, the lack of experience in the model designs, techniques, and instruments for the search and analysis of information, digital tools to address the subject and statistical programs. Regarding investigative skills, the main difficulty is the lack of experience, implying problems in academic and professional development since research through tasks such as reflection, analysis, formulation of hypotheses, and problem-solving allows cognitive and affective structure in students (Ulloa-Olano, 2022). In this regard, Álvarez-Gómez et al. (2022) mention that research skill development should begin with initial education, where children enhance their capacity for exploration, reflection, and creativity to know their world and face challenges. However, they also mention that perceptions from students and teachers of this topic are unfavorable because they do not give importance to the development of said research skills, leaving students devoid of scientific and educational methodological backgrounds when facing a research project.

Indeed, the attitude toward research is another of the difficulties for preparing the thesis because they refuse to carry it out since they think it implies a high level of theoretical and methodological knowledge. Thus, feeling inexperienced and with little knowledge generates stress, apathy, disinterest, and lack of motivation to carry out such a task, causing them to abandon it or even not start it (Criollo et al., 2017).

MATERIAL AND METHODS

A quantitative and transversal methodology was applied to obtain numerical data and analyze the research competencies for completing, presenting, and defending a thesis at a specific moment (spring 2024). The sample consisted of 79 students (total population) from the Teaching English and French Bachelor who were taking Research Seminar II.

The cross-sectional design provides a characterization of the situation. It made it possible to effectively identify the factors that affect the completion of students' theses. During the execution of the study, a Likert-type scale questionnaire (Rivas-Tovar, 2015) was used as a data collection technique, which provided detailed information about the attributes students perceived as obstacles to completing their theses. The analysis of this data provided valuable insight into understanding the reasons behind the difficulties students face in this crucial academic process.

FINDINGS

The results show that students perceived they have some techniques, abilities, knowledge, and competencies for researching. However, they also face some difficulties in investigation grouped into two variables: lack of knowledge and investigative skills. The former attribute refers to the lack of knowledge regarding the approaches, structure, writing, and delimitation of the study, and the latter focuses on problem formulation, design and validation of instruments, and, to a lesser extent, the construction of theoretical support.

In the following lines, findings are presented in detail. The first section focused on techniques for researching.

TABLE 1
QUANTITATIVE AND QUALITATIVE ANALYSIS TECHNIQUES

Dimension	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Techniques for analyzing quantitative data	27%	5%	14%	43%	11%
Techniques for analyzing qualitative data	35%	14%	35%	16%	0%
Techniques for writing a research paper	5%	49%	14%	24%	8%

The results show a varied distribution of the perception of the ability to analyze quantitative data. 27% strongly disagree, and 5% disagree with the statement that they possess and apply this technique, which means those students face significant difficulties in this area. This lack of confidence and skill can be a critical factor that negatively impacts their ability to complete dissertations because quantitative data analysis is crucial in academic research. Besides, 14% remain neutral, indicating a lack of certainty about their technique in quantitative data analysis. This ambivalence could reflect insufficient training or a lack of opportunities to practice and apply these techniques during their academic training. Neutrality may also express that these students have not had enough feedback or concrete experiences to allow them to adequately evaluate their skills in this area, which could be a barrier to the development and suitable application of these competencies in their thesis projects. Finally, 43% of the students agree, and 11% strongly agree that they possess and apply quantitative data analysis in their theses. These positive results indicate that almost half of the students feel prepared and capable in this area, which can contribute significantly to completing their theses. However, the disparity in responses indicates a need to strengthen training in research skills, especially in quantitative techniques, to ensure that all students have the necessary tools to complete their research effectively.

Regarding the techniques for analyzing qualitative data, findings reveal a notable deficiency in this dimension. 49% disagree with possessing and applying this technique in their theses. These percentages imply a lack of confidence in skills to handle qualitative data, which could negatively affect the quality and depth of research. This finding highlights the need to reinforce training in qualitative methodologies to improve research skills and ensure the successful completion of theses. Moreover, 35% adopted a neutral position, which could indicate a lack of self-knowledge or practical experience in this area. Only 16% of respondents agree that they adequately apply such a technique, which is insufficient to establish a

standard of investigative ability focused on qualitative data analysis. Thus, the results display the need to provide students with more practical opportunities to develop and apply this technique.

Considering techniques in writing research, 54% do not feel prepared in this area. At this point, it is worth mentioning that a lack of writing skills can be a significant obstacle to writing clearly and coherently for research result presentations. Furthermore, 14% are indecisive if they know the techniques for writing a research paper. These students demonstrate an ambivalent position, perhaps because they have a basic knowledge of these techniques but do not feel completely confident in their application, implying the need to reinforce and consolidate their skills through specialized tutoring that allows them to strengthen them. Finally, 32% agree with the techniques for writing a research paper. Although it is positive that almost a third of students feel competent in this area, the percentage is low, indicating considerable room for improvement and implementing strategies to include more practical activities related to academic writing in the curriculum.

The second section deals with knowledge related to research.

TABLE 2
KNOWLEDGE FOR RESEARCH

Dimension	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Knowledge for research design	8%	24%	24%	30%	14%
Knowledge about universal art of study	10%	57%	16%	14%	3%
Cultural knowledge about the object of study	5%	46%	16%	22%	11%

The table reveals a mixed view in terms of knowledge of research design. According to the data, 8% strongly disagree, and 24% disagree with the statement. Thus, they do not feel prepared in this crucial dimension. This lack of confidence can be an obstacle in writing their theses, promoting the need to reinforce training in research design. In addition, 24% assumed a neutral position, which implies a lack of clear self-assessment of their competencies. Therefore, this group of students could benefit from specific interventions that help evaluate and improve their knowledge to influence the completion of their thesis. Finally, 44% agree to have the knowledge needed to design research. This group shows strong confidence in their abilities, indicating the existence of a competency base to achieve academic goals.

Concerning knowledge about the universal art of study, the results indicate that the majority of students do not have solid knowledge. Specifically, 67% strongly disagree with knowing about universal art, which can represent a significant limitation in their ability to address a thesis effectively. This deficit is an obstacle to developing in-depth and well-founded research, affecting the quality and integrity of their final works. Furthermore, 16% remain neutral, confirming a lack of confidence or clarity in their self-assessment. Only 17% feel prepared in terms of knowledge of the universal art. These low percentages of agreement point out an urgent need to reinforce this dimension of knowledge in the educational curriculum, providing students with the tools necessary to improve their research skills.

Furthermore, the dimension of cultural knowledge of the object specifies that a significant majority of respondents, 54% (5% totally disagree and 49% disagree), do not have sufficient cultural knowledge about the object of study. It shows a notable lack in this area that affects the comprehensive understanding of a study because such a lack reflects the need for a deep understanding of the cultural contexts, traditions, and values for an appropriate interpretation of the object of study. On the other hand, 16% of those surveyed neither agreed nor disagreed with the said statement. Besides, 33% (22% agree and 11% totally agree) think they have a cultural understanding, presupposing training in robust cultural aspects

related to the object of study, allowing them to interpret it profoundly by integrating other variables such as their context, beliefs, values, customs, and identity.

The third section refers to the necessary skills in an inquiry.

TABLE 3
SKILLS FOR RESEARCH

Dimension	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Skills to state a research problem	14%	8%	27%	35%	16%
Skills for writing the state-of-art	32%	19%	24%	16%	9%
Skills for developing the theoretical framework	21%	22%	30%	16%	11%
Skills in designing research models	25%	27%	24%	19%	5%
Skills to validate models	19%	46%	19%	5%	11%
Skills in presenting research findings	0%	27%	35%	22%	16%

The findings of skills to state a research problem reveal that 51% possess such an ability that is an essential step for thesis preparation. This recognition highlights the development of analytical and synthesis skills to generate research questions to guide any investigative process. In this context, 14% totally disagree with managing this skill, along with an additional 8%, which means a significant portion of students lack analysis, critical, and reflective thinking skills to approach the problem. Furthermore, 27% are neutral, reflecting poor ability to understand and clarify the research problem. Therefore, it is essential to promote such skills since they contribute significantly to the conclusion of the thesis.

Regarding skills in writing state-of-art, the findings highlight that 51% of the participants (32% totally agree and 19% disagree) express that they cannot develop the state-of-the-art, which suggests a significant consensus on its relevance in the thesis writing process. On the other hand, only 25% agree with having developed this skill and feel capable of carrying out this stage. However, 24% are in a neutral position, which implies a general lack of awareness about the crucial importance of this process, prevailing the need for education and dissemination about their involvement in research since developing this skill implies conducting a comprehensive review of existing literature, identify gaps in knowledge, and establish a solid context for the study. Hence, promoting a broader and deeper understanding of this critical stage enhances the effectiveness of the thesis work.

Besides, the table also evidences a detailed distribution of the respondents' opinions on the skills necessary for the theoretical framework and their impact on thesis presentation. The data remark that 43% (21% strongly disagree and 22% disagree) do not have this ability. The above alludes to a generalized perception of a lack of understanding and application of theoretical foundations in the research process. Moreover, 27% apply skills to develop such a stage. However, a significant percentage, 30%, are neutral. Therefore, these results highlight the need to improve critical skills for writing a thesis because developing a solid theoretical framework requires a deep understanding of the existing literature and coherently integrating various concepts and theories.

Concerning the skills for designing research models, the data show that 52% do not have skills for investigative schematization, selection of investigative methods and techniques, data analysis, and interpretation of results. This considerably high percentage means a lack of necessary skills to structure and inform research using research models. On the other hand, 24% remain neutral regarding the topic, which is a lack of knowledge or clear understanding of research models. This neutrality underlies the need to increase awareness and training in research model designs to recognize and take advantage of

these skills for thesis elaboration. In conclusion, the results indicate an unfavorable perception, highlighting the need to encourage questioning and include technological tools and case studies to practice research design.

With the validation of models,16% (5% agree and 11% totally agree) claim to have such ability, as opposed to 65% who consider not managing it. This difference denotes a low understanding of the validation model process, where knowledge of statistical methods, data analysis skills, quantitative and qualitative methodology, and reliability, among others, are required. Possibly, participants did not experience the application of model validation or areas where this skill is essential. Furthermore, 19% (neither agree nor disagree) reflect an undecisive opinion on the questioning, meaning that this sample has not had sufficient exposure to model validation during their academic training. Therefore, developing this skill lets rigorous research validation, guaranteeing the robustness and credibility of the results.

Finally, there is a considerable difference in perceptions about the skills associated with the units to present research findings in preparing and presenting a thesis. Although 38% of those surveyed (16% totally agree and 22% agree) recognize these units as a fundamental skill, 35% do not have a defined opinion about them. This consensus could reflect students' research experiences with a training variable that avoids effective communication and study presentation skills.

The fourth section focuses attention on inevitable competencies for research.

TABLE 4
COMPETENCIES FOR RESEARCH

Dimension: Competencies for	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Designing instruments to collect data	0%	38%	43%	11%	8%
Instrument validation	24%	33%	24%	16%	3%
Writing in a target language	11%	13%	11%	49%	16%

The results indicate that 38% say they do not have the competence to design instruments, which leads to an insufficiency in creating means and tools consistent with the research context. Instrumentation in research is crucial since it requires theoretical framework understanding, knowledge of variables, development of concepts to measure, and analysis of results to obtain accurate and reliable information about the study. Furthermore, 43% show an ambivalent perception, which may be due to factors like the lack of clarity of operationalization of topics and little academic orientation, generating a lack of understanding about data collection. Likewise, 19% (11% agree and 8% totally agree) manage this ability, which is why the student probably develops interest and search skills to design research instruments. In summary, the instrument design improves the reliability of the study and contributes significantly to its relevance.

The table highlights that 57% acknowledge not having skills for instrument validation, which possibly denotes limitations in the application of instrumentation piloting, selection of collected data, component analysis, and verification of question consistency. 24% are impartial and indifferent to the validation process. Likewise, it can be inferred that the components to validate the resources are unknown. Thus, only 3% totally agree that they can apply this competence. This percentage invites us to reflect on students' limitations and shortcomings regarding their development of research skills.

Finally, the findings show a diversity in the perception and application of writing competence in a target language. 24% (11% disagree and 13% disagree) consider that they do not possess or apply this competence. This finding underscores the importance of addressing language barriers in academic research, especially in settings where English or French proficiency is not native for all students. Furthermore, 11% remain impartial, reflecting uncertainty about their writing in English or French. In contrast, 65% feel confident in their linguistic skills, which is essential for the coherence and cohesion of a thesis.

DISCUSSIONS

Thesis preparation is a crucial stage in the academic university students' training, particularly in the Faculty of Languages, where they face challenges related to research in foreign languages and teaching. Through the results obtained, a series of skills, knowledge, techniques, and competencies significantly affect the ability of students to carry out, present, and defend their thesis. These skills reflect deficiencies and a possible weakness in academic training.

A fundamental aspect of preparing a thesis is the skill in techniques to analyze quantitative and qualitative data. The results show that 43% do quantitative data analysis, while 27% reveal not to do so, perceived as a limitation for a thesis elaboration. On the other hand, 49% do not apply qualitative data competencies, and 35% maintain a neutral position in this regard. This ambivalence reveals an uncertain or underestimated perception of qualitative research despite the Bachelor's oriented toward the humanities, proving a limited understanding and application of this investigative approach. Ignorance or lack of awareness about the scope of a thesis is a sign of weak training in the appreciation of studies, especially those focused on the qualitative methodological field. Therefore, the need to focus on investigative skills based on immersion of thematic content and diversity in approaches is recognized to delimit the ideal methodological scope of the work (Labajos et al., 2022).

Likewise, 32%lack research design skills, which blocks the investigative search for information and methodological construction of the thesis project. In this regard, the lack of group and exploration activities prevents students from improving their research autonomy and thesis completion. Therefore, it is necessary to generate group work conditions based on collaboration to guide the direction of the thesis outline. By exposing the progress of the construction of the parts and structure of the content of a research project in front of the group, the student becomes involved and enriches his information background on various topics. In this sense, studies affirm that presenting research projects, explaining the research process, and sharing findings represent an opportunity for the student to resolve doubts, achieve involvement in the study topics, manage the search for sources in a varied way, and delimit the research design procedures (Sabariego et al., 2020). Regarding group work, promoting cooperation, active listening, selection of research topics, problem-solving, and understanding of the teacher's instructions are recognized. On the other hand, managerial activities of investigative support are required during the design of the methodological process of planning, focusing, and concentrating on the topic so that the student is encouraged to request assistance when necessary and develop self-management in the methodological design of their thesis (Daza and Mahelis, 2021).

Similarly, participants consider techniques for writing a research paper challenging (54%). It is due to writing problems, style, or a deeper problem of a cognitive nature. This difficulty implies the lack of assimilation of the theoretical bases used to observe the research objects, which could arise due to the lack of methodological understanding. If this occurs, essential components like the research question, theoretical framework, methodology, and results (Ramos, 2018) show a significant disconnection between them, leading to a deficient study. Regarding writing in English or French (49%), students highlight a favorable ability in investigative written expression, combining linguistic competence and grammatical knowledge to compose texts (Islas, 2021). In this sense, the research results show that, when talking about writing in a foreign language, not only lexical and syntactic elements are involved, but they also involve technical, cultural, and social aspects necessary to participate in the discursive culture, as well as in the activities of production and analysis of texts in research (Peña, 2019). Therefore, reading and writing in a foreign language provides access to new information and a breadth of knowledge, stimulating students' construction ideas. Hence, the teacher considers the development of writing in a foreign language as an indispensable meta-competence in the novice researcher student (Moscoso-Ramírez and Carpio-Cordero, 2022).

In addition, students claim to have limitations in knowledge about the universal art of the study (67%), which represents complications in the ability to delimit and select concepts and research similar to the topic treated from different perspectives. Hence, difficulties appear in critical and reflective thinking skills for constructing central categories within the support of documentary research (Ramos, 2018). As

knowledge about the state of the art could be perfected, at this point in the research process, students achieve the assimilation process and understanding of the field or fundamental principles related to the specific area of the state in question. Moreover, various studies show that the relevant knowledge of universal art is significant for research skills and project completion (Correa and Oliva, 2019). Likewise, students recognize the relevance of theoretical knowledge to state a research problem (51%), significantly impacting the thesis construction process. Understanding the research problem is relevant since it is a core part of the study. That is why developing the concept is challenging in teaching practice (Sabariego et al., 2020). To address this, educational institutions should support students in developing skills in stating research problems. It could include workshops, one-on-one tutoring, or online resources specifically designed to build these skills in students. Additionally, supervisors and mentors play a role in providing personalized guidance and feedback throughout this process. By strengthening support in this area, institutions can help students gain confidence in their abilities to state research problems, contributing to the quality and efficiency of their theses.

Likewise, students do not develop the theoretical framework (32%) by speaking with a limited development of understanding and use of theoretical foundations. The elaboration of the theoretical framework in research goes beyond the epistemological complexities (Ramos, 2018) related to a conceptual system or alternatives that influence the theoretical construction of the phenomenon under study. In some cases, the process is reduced to a superficial analysis of the articles and books used in teaching research, placing the teacher in absolute knowledge (Flores-Mondragón, 2019). This approach emphasizes the need for teachers to be trained and constantly updated with access to techniques, tools, and methods that allow them to act as effective facilitators of learning. In this way, they develop the necessary skills for the investigative process and conclusion. Participants also report difficulties in the skills to present research findings, which indicates a lack of security in the understanding and development of the thesis, observing a tendency towards the answer neither agree nor disagree (35%), reflected in the ability to design instruments for data collection (43%). Students are also indecisive regarding validating the instrumentation (24%, graph 14). The uncertainty about this ability produces in the student an attitude of rejection and conflict to continue the preparation of the thesis. Confidence in understanding and applying knowledge is essential for the successful conclusion of the research act since students feel satisfied when understanding, implementing, and sharing research findings (Rodríguez and Sánchez, 2022).

Moreover, the student highlights the deficiency in the skill in the design of research models (52%, graph 11) and the validity process (65%, graph 12) to conclude the thesis. Likewise, the indifference of some students suggests a lack of understanding of the methodological process. Although students completed the research training curricular subjects, there are difficulties in the continuity and progress of the thesis due to not knowing the application of the theory, which leads to reflecting on the possible discordance in the monitoring and thematic content of subjects such as methodology and research seminars, where favorable and progressive research practices are expected for the completion of the thesis (D'Olivares and Casteblanco, 2019). Although students recognize the importance of theoretical knowledge skills for problem formulation, model design, and the validity process, they still have doubts about their abilities to complete projects comprehensively, specifically in the field of foreign languages, since students do not seek to complete the research work and prefer to obtain a degree through another modality. Consequently, students need to receive training in research skills under an interdisciplinary approach, integrating aspects of the study plan, specific content in the courses, innovative methodologies, and research practices to strengthen their scientific capacity and address global challenges (García-Gutiérrez and Aznar-Díaz, 2018; Bann et al., 2020).

As in any research, there are study limitations. In this case, one is the design because a qualitative approach could enrich the quantitative data. In addition, a longitudinal scope can lead to knowing if, across generations, the characterization of the difficulties in preparing the thesis are the same or vary. The above gives guidance to envision future lines of research like socio-emotional aspects that impact the preparation of the thesis, advisor-student relationship as a guide for the achievement of the research

project, analysis of the curricular contents of the training subjects in research, profile of the research student, and development of interdisciplinary skills for research training, among others.

CONCLUSIONS

The thesis defense degree modality requires students' research training processes. In this sense, skills that resolve the difficulties presented in research work and support professional training are relevant. Indeed, the lack of skills in knowledge about inquiry methods, instrumental design, and analysis models are presented as significant obstacles to research completion, causing delay and discouragement in the student. Therefore, research-based and interdisciplinary teaching in higher education is essential to foster curiosity, creativity, and analysis of situational conditions to build a research culture for project completion. Thus, investigative skills become tools for specific capabilities to exercise project elaboration. Within this context, the teacher must promote reflection, criticism, and systematicity of investigative methods and techniques to discover, describe, and interpret facts and then complete the investigation. Finally, university graduates who lack research skills to prepare a thesis are at a disadvantage in areas of professional development. Therefore, searching to optimize research training and prepare them to be more competitive in complex environments leads to answering questions and generating interventions for thesis completion.

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